

**REMARKS**

**Status of the Claims**

Claims 1 and 3-9 are pending. Claims 1 and 3 have been amended to add the term "anionic" to more clearly define the invention. Support for these amendments can be found at page 9, lines 2-10. Reconsideration is respectfully requested in light of the following remarks.

**Obviousness-Type Double Patenting**

Claims 1 and 3-9 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-5 of Tanaka '253 (US Patent No. 6,239,253). Applicants traverse.

Applicants have amended claims 1 and 3 to recite "two or more anionic surfactants". Applicants respectfully submit that Tanaka '253 discloses two or more surfactants having different coagulation properties to calcium ions ( $\text{Ca}^{2+}$ ) to a natural rubber, but this latex is treated with an anionic and a nonionic surfactant and a protease. Please see claim 1 (i.e., the broadest independent claim) in Tanaka '253. In the claims, Tanaka '253 says nothing of two or more anionic surfactants. Accordingly, the claims of Tanaka '253 cannot render obvious the

claims of the instant invention. The obviousness-type double patenting rejection is inapposite. Withdrawal of the rejection is warranted and respectfully requested.

**Rejections under 35 U.S.C. §103**

Claims 1 and 3-9 are rejected under 35 USC §103(a) as being unpatentable over any of Tanaka '253, Tanaka '567, (US Patent No. 5,910,567) or Tanaka '212 (US Patent No. 5,610,212).

Applicants traverse.

**Present Invention**

The present invention, as recited in claim 1, relates to a deproteinized natural rubber latex which is obtained by subjecting a natural rubber latex to a treatment for decomposition and removal of a protein, wherein the treatment for decomposition of a protein is conducted by adding a protease and two or more anionic surfactants having different coagulation properties to calcium ions ( $\text{Ca}^{2+}$ ) to a natural rubber latex and maturing the natural rubber latex, and

the two or more surfactants are stably dispersed when the concentration of  $\text{Ca}^{2+}$  in an aqueous solution at 25°C containing

the surfactants is 0.1 mol/L or less, and are coagulated when the concentration of  $\text{Ca}^{2+}$  in the aqueous solution is 1.0 mol/L or more.

Removal of the Rejections over Tanaka '253, Tanaka '567, or Tanaka '212

In the newly claimed invention, a latex is treated with the two or more anionic surfactants having different coagulation properties to calcium ions ( $\text{Ca}^{2+}$ ) and a protease, as is shown by the results of Examples and Comparative Examples (see Tables 3 to 9, for example). The Examiner's attention is drawn to the fact that even when two or more anionic surfactants, which have no difference in their coagulation properties are used, sufficient film formation could not be attained.

Applicants submit that the results of the Experiments in Tables 3 to 9 show remarkably unexpected superiority of the instantly claimed invention relative to the inventions disclosed in the cited references. In particular, treatment with two or more anionic surfactants having different coagulation properties to calcium ions shows remarkable improvement relative to the compositions disclosed in the cited references. This is because the two or more anionic surfactants having different coagulation

properties to calcium ions are stably dispersed when the concentration of  $\text{Ca}^{2+}$  in an aqueous solution at 25°C containing the anionic surfactants is 0.1 mol/L or less, and are coagulated when the concentration of  $\text{Ca}^{2+}$  in the aqueous solution is 1.0 mol/L or more.

In contrast to the instant invention, although Tanaka '253 and Tanaka '212 teach a combination use of an anionic surfactant and a nonionic surfactant, these two references are silent about treating a latex with two or more anionic surfactants having different coagulation properties to calcium ions.

Tanaka '567 relates to a method for producing a formed product of deproteinized natural rubber latex including a protein decomposition step of adding a protease and a surfactant to natural rubber latex to decompose protein contained in the natural rubber latex. However, this reference is silent about treating a latex with two or more anionic surfactants having different coagulation properties to calcium ions.

Thus, Applicants assert that the Examiner has failed to make out a *prima facie* case of obviousness with regard to the 35 USC §103(a) rejection over any of Tanaka '253, Tanaka '567, or Tanaka '212. Three criteria must be met to make out a *prima facie* case of obviousness.

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- 2) There must be a reasonable expectation of success.
- 3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

See MPEP §2142 and *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). In particular, the Examiner has failed to meet the third element to make a *prima facie* obviousness rejection. As was pointed out above, none of Tanaka '253, Tanaka '567, or Tanaka '212 teach or suggest using two or more anionic surfactants having different coagulation properties to calcium ions. For this reason alone, the rejection is inapposite.

Moreover, Applicants submit that even if the Examiner had made a proper *prima facie* rejection (which Applicants do not concede), the instant claimed invention has superior properties that could never be attained by the disclosure of Tanaka '253, Tanaka '567, or Tanaka '212. In particular, Applicants respectfully point out that the element of "adding two or more anionic surfactants having different coagulation properties with respect to calcium ions" to the latex provides a latex that is

superior in balance between the film forming properties by means of the anode coagulation method (as disclosed in Tanaka '253). None of Tanaka '253, Tanaka '567 or Tanaka '212 are able to attain this balance. For the reasons advanced above, Applicants submit that none of Tanaka '253, Tanaka '567, or Tanaka '212 can render obvious the instant invention. Withdrawal of the rejection is warranted and respectfully requested.

With the above remarks and amendments, Applicants believe that the claims, as they now stand, define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

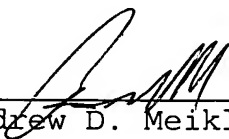
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required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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